Abstract

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Renal pathology and diagnostic methods

Bachelor thesis

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This thesis is focused on diagnostic methods in various renal diseases. The first part is devoted to the anatomy and physiology of the kidney, where is outlined how look and operate various parts of kidneys and also the whole organ. Next part si composed of analysis of the urine, where is described chemical analysis with test strip, when the colore change of indicator of zones subtracted result according to the color scale on the container tube. Nowadays are two types of devices for reading the diagnostic strips on the market. Basic reflex photometer operated by person or fully automatic one. Further part describe the examination of urinary sediment using light microscopy or phase contrast microscopy. In modern biochemical laboratories urinary sediment is investigated using flow cytometry or digital capture particles. The last part is devoted to imaging methods and renal biopsy, to their description, indications and pa comparison with another method. Imaging methods include ultrasonography, native image renal, excretory urography, ascendent ureter/pyelography, computed tomography, multidetector computed tomography, magnetic resonance imaging, renal angiography and radionuclide methods. The aim of this thesis is to describe the basic anatomy and function of the kidneys and sum up diagnostic methods currently used in kidney disease.

Key words: kidney, urine, diagnostic strips, urine sediment, imaging methods, biopsy